specification, a low-resistance metal film is a single layer film containing any one of Cu, Ni, and Au, or a multilayer film containing at least one of these single layers.

Thus, it is respectfully requested that the rejection under §112 be withdrawn. It is respectfully submitted that claims 1-14 meet the requirements under 35 U.S.C. §112.

Claims 1-4, and 6-13 have been rejected under 35 U.S.C. §102(b) as anticipated by JP 10-245,444 (444). The Office states that:

Applicants respectfully traverse this rejection.

The 444 reference teaches a method of forming a conductive coating layer on a non-conductive layer in which a non-conductive resin layer is sulfonated, neutralized, contacted with a metal ion. The metal ions in contact with the sulfonated non-conductive layer are reduced to form a metallic conductive layer on the surface of the non-conductive layer. The 444 reference neither discloses or suggests patterning of a resin film prior to forming the metal film in order to form a metal line or metal wire structure. The 444 reference merely teaches methods for fabricating conductive metal layers on a non-conductive surface.

In contrast, the present invention provide methods of fabricating metal wires on a surface. As provided by claim 1, the metal wire fabrication methods comprises the steps of:

1. forming a ground resin film by applying a resin onto an insulating substrate;
2. patterning the ground resin film; and
3. forming a low-resistance metal film selectively on the patterned ground resin film by a wet film formation technique.

The methods disclosed in the 444 reference teaches the formation of a conductive metal **layer** deposited onto a non-conductive layer not the patterning of a resin film followed by selective metal film formation on the patterned resin film. Thus, the methods taught by the 444 reference are completely different than those provided by the instant application.

Claim 1 is patentable over JP 10-245,444. Claims 2-13 depend from claim 1 and are therefore also patentable over JP 10-245,444. Applicants respectfully request the withdrawal of the rejection and reconsideration of the claims.

Claims 1-4 and 6-14 have been rejected under 35 U.S.C. §103(a) as being unpatentable over JP 10-245,444 in view of Larsson (U.S. Patent 6,303,278 B1).

Applicants respectfully traverse this rejection.

As discussed above, the 444 reference fails to teach or suggest a method of fabricating a metal wire because, among other things, the 444 reference teaches the formation of a conductive metal layer on a non-conductive base layer. Moreover, the 444 reference fails to disclose or suggest patterning a non-conductive layer followed by selective metal film formation on the patterned resin film such that a metal line or metal wire structure is formed on the substrate.

Larsson fails to overcome the limitations of the 444 reference. As the reference is understood, Larsson teaches a method of modifying a surface by grafting a composition to specified portions of the surface, absorbing metal ions onto the grafted composition and then depositing additional metal onto the grafted composition by traditional deposition techniques. Larsson neither discloses nor suggests a method of fabricating a metal line or metal wire comprising (a) forming a ground resin film, or (b) patterning the ground resin film.

In contrast, the present invention provides methods of fabricating a metal wiring, the method comprising the steps of:

1. forming a ground resin film by applying a resin onto an insulating substrate;
2. patterning the ground resin film; and
3. forming a low-resistance metal film selectively on the patterned ground resin film by a wet film formation technique.

The present invention would not have been obvious to one skilled in the art based on any combination of the 444 reference and Larson. Claim 1 is patentable over the combined teachings of JP 10-245,444 and Larsson. Claims 2-4 and 6-14 depend from claim 1 and are therefore also

patentable over the combined teachings of JP 10-245,444 and Larsson. Applicants respectfully request the withdrawal of the rejection and reconsideration of the claims.

Claims 1-13 have been rejected under 35 U.S.C. §103(a) as obvious over JP 10-245,444 in view of Iwasaki (U.S. Patent 5,323,534).

Applicants respectfully traverse this rejection.

Iwasaki fails to overcome the limitations of the 444 reference. As the reference is understood, Iwasaki teaches, as part of a method of fabricating coaxial cables, the deposition of preformed coaxial cables onto an insulating substrate, applying an adhesive epoxy layer and then depositing a copper layer onto the epoxy layer. Moreover, Iwasaki teaches the inclusion of a catalyst, e.g., palladium on aluminum silicate, into the epoxy adhesive layer as a catalyst to accelerate the formation of the copper layer deposited thereon. Iwasaki neither discloses or suggests patterning a ground resin layer as a process step in the fabrication of a metal wire.

It would not have been obvious to one skilled in the art from any combination of 444 and Iwasaki to fabricate metal wire by a process comprising the steps of:

1. forming a ground resin film by applying a resin onto an insulating substrate;
2. patterning the ground resin film; and
3. forming a low-resistance metal film selectively on the patterned ground resin film by a wet film formation technique.

The present invention would not have been obvious to one skilled in the art based on any combination of the 444 reference and Iwasaki. Claim 1 is patentable over the combined teachings of JP 10-245,444 and Iwasaki. Claims 2-13 depend from claim 1 and are therefore also patentable over the combined teachings of JP 10-245,444 and Iwasaki. Applicants respectfully request the withdrawal of the rejection and reconsideration of the claims.

Reconsideration and allowance of claims 1-14 is respectfully requested in view of the foregoing discussion. This case is believed to be in condition for immediate allowance. Applicant respectfully requests early consideration and allowance of the subject application.

If for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge Deposit Account No. 04-1105.

Should the Examiner wish to discuss any of the amendments and/or remarks made herein, the undersigned attorney would appreciate the opportunity to do so.

Respectfully submitted,

Date: August 5, 2002

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